



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

November 8, 2011

Mr. Mike Colomb
Site Vice President
Entergy Nuclear Northeast
James A. FitzPatrick Nuclear Power Plant
P. O. Box 110
Lycoming, NY 13093

SUBJECT: JAMES A. FITZPATRICK NUCLEAR POWER PLANT - NRC INTEGRATED
INSPECTION REPORT 05000333/2011004

Dear Mr. Colomb:

On September 30, 2011, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your James A. FitzPatrick Nuclear Power Plant (FitzPatrick). The enclosed inspection report documents the inspection results which were discussed on October 19, 2011, with Mr. Brian R. Sullivan and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, no findings of significance were identified. However, a licensee-identified violation which was determined to be of very low safety significance is listed in this report. The NRC is treating this violation as a non-cited violation (NCV) consistent with Section VI.A.1 of the NRC Enforcement Policy because of the very low safety significance of the violation and because it is entered into your corrective action program. If you contest this NCV, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN.: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region I; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at FitzPatrick.

In accordance with 10 CFR Part 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of the NRC's document system (ADAMS). ADAMS is accessible from the NRC Website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

A handwritten signature in black ink, appearing to read "Mel Gray". The signature is fluid and cursive, with the first name "Mel" and last name "Gray" clearly distinguishable.

Mel Gray, Chief
Projects Branch 2
Division of Reactor Projects

Docket No.: 50-333
License No.: DPR-59

Enclosure: Inspection Report 05000333/2011004
w/Attachment: Supplemental Information

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Sincerely,

/RA/

Mel Gray, Chief
Projects Branch 2
Division of Reactor Projects

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U.S. NUCLEAR REGULATORY COMMISSION**REGION I**

Docket No.: 50-333

License No.: DPR-59

Report No.: 05000333/2011004

Licensee: Entergy Nuclear Northeast (Entergy)

Facility: James A. FitzPatrick Nuclear Power Plant

Location: Scriba, New York

Dates: July 1 through September 30, 2011

Inspectors: E. Knutson, Senior Resident Inspector
S. Rutenkroger, PhD, Resident Inspector
J. Furia, Senior Health Physicist
J. Noggle, Senior Health Physicist
R. Rolph, Health Physicist
K. Cronk, Project Engineer
J. Brand, Reactor Inspector

Approved by: Mel Gray, Chief
Projects Branch 2
Division of Reactor Projects

Enclosure

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SUMMARY OF FINDINGS

IR 05000333/2011004; 07/01/2011 - 09/30/2011; James A. FitzPatrick Nuclear Power Plant; Routine Resident Integrated Report.

The report covered a three-month period of inspection by resident inspectors and announced inspections performed by regional inspectors. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

Other Findings

A violation of very low safety significance that was identified by Entergy personnel was reviewed by the inspectors. Corrective actions taken or planned by Entergy personnel have been entered into Entergy's corrective action program (CAP). This violation and corrective action tracking number are listed in Section 4OA7 of this report.

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REPORT DETAILS

Summary of Plant Status

The James A. FitzPatrick Nuclear Power Plant (FitzPatrick) began the inspection period operating at 100 percent reactor power. On September 28, 2011, power was reduced to 65 percent to perform a control rod sequence exchange, single control rod scram time testing and blade interference monitoring, main condenser water box back washing, and turbine valve testing. Operators restored power to 100 percent the following day. The plant continued to operate at or near full power for the remainder of the inspection period.

1. REACTOR SAFETY**Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity****1R01 Adverse Weather Protection (71111.01 - 1 sample)****a. Inspection Scope**

The inspectors reviewed FitzPatrick personnel's preparations in accordance with AOP-13, "High Winds, Hurricanes and Tornadoes," Revision 13, for potential high wind and heavy rain conditions associated with Hurricane Irene on August 28, 2011. The inspectors reviewed the operating status of the reactor, reviewed the procedural limits and actions associated with high winds and hurricanes, and walked down accessible areas of the reactor building (RB) and turbine building (TB) to assess vulnerabilities to high winds and heavy rains. Walkdowns were also conducted in the emergency diesel generator (EDG), emergency service water (ESW), and greenhouse rooms. The inspectors reviewed conditions following the occurrence of the adverse weather to assess its impact. Documents reviewed for each section of this inspection report are listed in the Attachment.

These activities constituted one impending adverse weather conditions inspection sample.

b. Findings

No findings were identified.

1R04 Equipment Alignment (71111.04)**.1 Quarterly Partial System Walkdown (71111.04Q - 3 samples)****a. Inspection Scope**

The inspectors performed three partial system walkdowns to verify the operability of redundant or diverse trains and components during periods of system train unavailability or following periods of maintenance. The inspectors referenced system procedures, the updated final safety analysis report (UFSAR), and system drawings in order to verify the alignment of the available train was proper to support its required safety functions. The

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inspectors also reviewed applicable condition reports (CRs) and work orders (WOs) to ensure that FitzPatrick personnel identified and properly addressed equipment discrepancies that could impair the capability of the available equipment train, as required by Title 10, Code of Federal Regulations (10 CFR) 50, Appendix B, Criterion XVI, "Corrective Action." The inspectors performed a partial walkdown of the following systems:

- 'A' residual heat removal (RHR) system when the 'B' RHR system was out of service for testing;
- Diesel engine driven fire pump 76P-1 upon completion of post maintenance testing (PMT); and
- 'A' core spray system while the 'B' core spray system was out of service for testing.

These activities constituted three partial system walkdown inspection samples.

b. Findings

No findings were identified.

1R05 Fire Protection (71111.05)

.1 Quarterly Review (71111.05Q - 5 samples)

a. Inspection Scope

The inspectors conducted inspections of fire areas to assess the material condition and operational status of fire protection features. The inspectors verified, consistent with applicable administrative procedures, that combustibles and ignition sources were adequately controlled; passive fire barriers, manual fire-fighting equipment, and suppression and detection equipment were appropriately maintained; and compensatory measures for out-of-service, degraded, or inoperable fire protection equipment were implemented in accordance with FitzPatrick's fire protection program. The inspectors evaluated the fire protection program for conformance with the requirements of license condition 2.C(3), "Fire Protection."

- East switchgear room, fire area/zone II/SW-2;
- West switchgear room, fire area/zone IC/SW-1;
- 'A' and 'C' EDG rooms and switchgear room, fire area/zone V/EG-1, EG-2, EG-5;
- East crescent area, fire area/zone XVII/RB-1E; and
- North safety related pump room, fire area/zone XIII/SP-2.

These activities constituted five quarterly fire protection inspection samples.

b. Findings

No findings were identified.

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1R06 Flood Protection Measures (71111.06 - 1 sample)a. Inspection Scope

The inspectors examined manhole MH-7A in the 115 kilovolt (kV) switchyard, and MH-5A by main transformer T1A, during FitzPatrick personnel's annual inspection of yard manholes performed under WO 52285065-01. These manholes contain non-safety class electrical cables that could affect the reliability of 115 kV offsite power. The inspectors also examined the condensate storage tank (CST) pit, which contains safety class instrument cables. The inspectors verified that cable insulation was not degraded and that cable support structures were adequate to maintain the integrity of the cables.

The inspectors observed that the manholes were equipped with float-actuated sump pumps, but that there were no level indicators or alarms to alert operators to a pump failure. The inspectors noted that CR-JAF-2011-04407 documented sump pump issues that had been identified during the annual inspection, including excessive water accumulation in one manhole due to a stuck float actuator, and a failed sump pump in MH-7A. These conditions did not constitute violations of regulatory requirements because the affected manholes did not contain safety class electrical cables. The inspectors also noted that the CST pit is checked during daily operator rounds and therefore that the safety related cables were not likely to become submerged due to similar sump float issues.

These activities constituted one underground bunker/manhole inspection sample.

b. Findings

No findings were identified.

1R07 Heat Sink Performance (71111.07 - 1 sample)a. Inspection Scope

The inspectors reviewed the ESW system annual thermal performance test that was performed on April 27, 2011 in accordance with ST-8Q, "Testing of the Emergency Service Water System (IST)," Revision 41. This test determines the maximum lake temperature at which individual unit coolers in the east and west electric bays, and east and west crescents, can be considered operable. Results that are less than the TS maximum allowable service water inlet temperature of 85 degrees Fahrenheit (°F) limit the plant's ability to operate under conditions of elevated lake temperature until the unit cooler degradation is corrected. The inspectors noted that the operability of one unit cooler, 67UC-16B, was limited to 84°F service water inlet temperature. The inspectors verified that actual lake temperature had not exceeded this value during the summer season.

These activities constituted one heat sink performance inspection sample.

b. Findings

No findings were identified.

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1R11 Licensed Operator Regualification Program (71111.11Q - 1 sample)a. Inspection Scope

On September 12, 2011, the inspectors observed licensed operator simulator training to assess operator performance during a scenario to verify that crew performance was adequate and evaluators were identifying and documenting crew performance problems. The inspectors evaluated the performance of risk significant operator actions, including the use of emergency operating procedures. The inspectors assessed the clarity and effectiveness of communications, the implementation of appropriate actions in response to alarms, the performance of timely control board operation and manipulation, and the oversight and direction provided by the shift manager. Licensed operator training was evaluated for conformance with the requirements of 10 CFR Part 55, "Operators' Licenses."

These activities constituted one quarterly operator simulator training inspection sample.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12Q - 3 samples)a. Inspection Scope

The inspectors reviewed performance-based problems involving selected in-scope structures, systems, or components (SSCs) to assess the effectiveness of the maintenance program. The reviews focused on the following aspects when applicable:

- Proper maintenance rule scoping in accordance with 10 CFR Part 50.65;
- Characterization of reliability issues;
- Changing system and component unavailability;
- 10 CFR 50.65 (a)(1) and (a)(2) classifications;
- Identifying and addressing common cause failures;
- Appropriateness of performance criteria for SSCs classified (a)(2); and
- Adequacy of goals and corrective actions for SSCs classified (a)(1).

The inspectors reviewed system health reports, maintenance backlogs, and Maintenance Rule basis documents. The documents reviewed are listed in the Attachment. The following systems were selected for review.

- Control rod drive hydraulic system;
- ESW system; and
- Standby liquid control (SLC) system.

These activities constituted three quarterly maintenance effectiveness inspection samples.

b. Findings

No findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13 - 5 samples)

a. Inspection Scope

The inspectors reviewed maintenance activities to verify that the appropriate risk assessments were performed prior to removing equipment for work. The inspectors reviewed whether risk assessments were performed as required by 10 CFR 50.65(a)(4), and were accurate and complete. When emergent work was performed, the inspectors reviewed whether plant risk was promptly reassessed and managed. The documents reviewed are listed in the Attachment. The reviews focused on the following activities:

- The week of August 15, that included 'A' and 'C' EDG monthly surveillance test, division 1 anticipated transient without scram (ATWS) pressure instrument quarterly surveillance test, 'A' SLC system quarterly function test, 'A' core spray quarterly surveillance test, and emergent maintenance to identify and repair a leak in the west diesel fire pump cooling system.
- The week of August 29, that included 'B' and 'D' EDG monthly surveillance test, division 2 ATWS pressure instrument quarterly surveillance test, 'B' SLC system quarterly function test, 'B' core spray quarterly surveillance test, and emergent maintenance to replace the 'B' core spray hold pump discharge check valve.
- The week of September 5, that included a one day maintenance outage for outgoing 345 kV line 1, planned maintenance on the 'B' reactor protection system (RPS) motor-generator, testing of the 'B' RPS electrical protection assemblies, 'B' average power range monitor system flow bias channel functional test, torus-to-drywell vacuum breaker operability test, main steam isolation valve limit switch instrument quarterly surveillance test, and emergent maintenance to replace the 'B' core spray hold pump seal.
- The week of September 19, that included reactor core isolation cooling (RCIC) system instrumentation and pump quarterly surveillance tests, replacement of the 'A' electro-hydraulic control pump, a one day maintenance period for the 'A' RHR service water system, and emergent maintenance to troubleshoot a speed indication problem with the 'A' reactor water recirculation pump, troubleshoot a startup transient speed/pressure issue with the RCIC pump, and replace the local frequency meter for the 'A' EDG.
- The week of September 26, that included high pressure coolant injection system quarterly surveillance test, 'B' and 'D' EDG monthly surveillance test, a planned power reduction to 65 percent for a control rod sequence exchange, single control rod scram time testing and blade interference monitoring, backwashing main condenser water boxes, and main turbine valve testing, 'B' RHR quarterly surveillance test to perform increased frequency vibration monitoring.

These activities constituted five maintenance risk assessments and emergent work control inspection samples.

b. Findings

No findings were identified.

1R15 Operability Evaluations (71111.15 - 5 samples)

a. Inspection Scope

The inspectors reviewed operability determinations to assess the acceptability of the evaluations; the use and control of applicable compensatory measures; and compliance with technical specifications (TSs). The inspectors' reviews included verification that the operability determinations were conducted as specified by EN-OP-104, "Operability Determination Process." The technical adequacy of the determinations was reviewed and compared to the TSs, UFSAR, and associated design basis documents (DBDs). The inspection focused on the following operability reviews:

- CR-JAF-2011-03517 concerning the effect of inaccurate period meter indication on 'A' source range monitor operability;
- CR-JAF-2011-04281 concerning RPS relay time response testing and the criteria for testing RPS relay 05A-K101C, reactor pressure instrument;
- CR-JAF-2011-04411 concerning continued operability of the 'B' core spray system while its hold (keep full) pump was isolated due to reverse leakage through the discharge check valve and the keep full function was being performed by the condensate transfer system;
- CR-JAF-2011-04457 concerning continued operability of four control rods after receiving notification that the vendor's revised channel friction metric indicated that these control rods may experience degraded performance during insertion; and
- CR-JAF-2011-04774 concerning continued operability of the RCIC system with a degraded check valve in the test return line to the CST.

These activities constituted five operability evaluation inspection samples.

b. Findings

No findings were identified.

1R18 Plant Modifications (71111.18 - 2 samples)

a. Inspection Scope

The inspectors assessed the adequacy of the 10 CFR 50.59 evaluations for the following permanent and temporary modifications respectively. The inspectors' reviews considered whether the installations were consistent with the modification documentation, that the drawings and procedures were updated as applicable, and that the post-installation testing was adequate. The following reviews represented one permanent modification inspection sample and one temporary modification inspection sample:

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- Permanent modification of the RPS to support RPS test box usage during surveillance testing, thereby preventing initiation of actual half scrams due to testing, performed in accordance with Engineering Change (EC) 15347, "Install Pomana Type Test Jacks in Panels 09-15, 09-17 for RPS Test Box Use;" and
- Temporary modification of the 'A' and 'B' reactor water recirculation motor-generators that recalibrated the tachometer generator voltage regulator circuits to produce a lower voltage-to-speed response, performed in accordance with EC 25477 and EC 25480, "Recirc Tach Generator 02-184P-1A/B(TACH) 115V Output Acceptance."

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (PMT) (71111.19 - 6 samples)

a. Inspection Scope

The inspectors reviewed post-maintenance test procedures and associated testing activities for selected risk-significant mitigating systems to assess whether the effect of maintenance on plant systems was adequately addressed by control room and engineering personnel. The inspectors verified whether test acceptance criteria were clear, demonstrated operational readiness, and were consistent with DBDs; test instrumentation had current calibrations, adequate range, and accuracy for the application; and tests were performed, as written, with applicable prerequisites satisfied. Upon completion, the inspectors verified whether equipment was returned to the proper alignment necessary to perform its safety function. PMT was evaluated for conformance with the requirements of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control." The documents reviewed are listed in the Attachment. PMT activities associated with the following WOs were reviewed:

- WO 00228000, preventive maintenance on the 'A' standby gas treatment (SGT) system;
- WO 52035020, preventive maintenance replacement of 05A-K128D, an RPS relay for annunciator 09-5-2-60;
- WO 29026203, replacement of 'A' EDG local frequency meter;
- WO 52222339, RPS reactor pressure instrument response time testing of 05A-K101C;
- WO 23477801, rebuild core spray 'B' hold pump; and
- WO 52038354, replacement of RCIC low steam pressure master trip unit, 13MTU-287C.

These activities constituted six PMT inspection samples.

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22 - 7 samples)a. Inspection Scope

The inspectors witnessed performance of surveillance tests (STs) and/or reviewed test data of selected risk-significant SSCs to assess whether the SSCs satisfied TSs, UFSAR, technical requirements manual, and station procedure requirements. The inspectors reviewed whether test acceptance criteria were clear, demonstrated operational readiness, and were consistent with DBDs; test instrumentation had current calibrations, adequate range, and accuracy for the application; and tests were performed, as written, with applicable prerequisites satisfied. Upon ST completion, the inspectors verified that equipment was returned to the status specified to perform its safety function. The following STs were reviewed:

- ST-2AL, "RHR Loop A Quarterly Operability Test (IST)," Revision 31;
- ST-2XA, "RHR service Water Loop A Quarterly Operability Test (IST)," Revision 13;
- ST-2AM, "RHR Loop B Quarterly Operability Test (IST)," Revision 31;
- ST-24J, "RCIC Flow Rate and Inservice Test (IST)," Revision 41;
- ISP-100D-RPS, "RPS Instrument Functional Test/Calibration (ATTS)," Revision 37;
- ST-3PB, "Core Spray Loop B Quarterly Operability," Revision 21; and
- ISP-16, "Drywell Floor Drain Sump Flow Loop Functional Test/Calibration*," Revision 36.

These activities represented seven surveillance testing inspection samples.

b. Findings

No findings were identified.

2. RADIATION SAFETY**Cornerstone: Occupational Radiation Safety and Public Radiation Safety**2RS1 Radiological Hazard Assessment and Exposure Controls (71124.01 - 1 sample)a. Inspection Scope

The inspectors reviewed the performance indicators for the Radiation Cornerstone, recent operational occurrences and the latest quality assurance audit of the Radiation Protection program.

Radiological Hazard Assessment

The inspectors reviewed changes to plant operations that may result in a significant new radiological hazard for onsite workers or members of the public since the last inspection. The inspectors verified that FitzPatrick staff have assessed the potential impact of these changes and has implemented periodic monitoring, as appropriate, to detect and quantify the radiological hazard.

Recent radiological surveys from more than six plant areas were reviewed by the

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inspectors to evaluate the thoroughness and frequency of the surveys and that they were appropriate based on the radiological hazards.

The inspectors conducted walkdowns and performed independent radiation surveys of the facility, including radioactive waste processing, storage, and handling areas, to evaluate the existing radiological conditions and the efficacy of the associated radiological postings and controls.

The inspectors observed and evaluated the following radiological risk-significant work activity: Placement of a shield lid on top of a loaded on-site storage container in the radwaste truck bay (a transient locked high radiation area (HRA)).

With respect to the above work activity, the inspectors verified that appropriate prework surveys were performed and were sufficient to identify and quantify the radiological hazards and to establish adequate protective measures. In addition, the inspectors reviewed applicable radiological surveys associated with this work activity to determine if hazards were properly identified, including the following: identification of hot particles, the presence of alpha emitters, the potential for airborne radioactive materials, the hazards associated with work activities that could negatively affect the radiological conditions, and any significant radiation field dose gradients that could result in nonuniform exposures of the body. The inspectors selected at least five air sample survey records during 2011 and verified that the samples were collected and counted in accordance with FitzPatrick procedures. The inspectors observed work in potential airborne areas to evaluate if applicable air monitoring was representative of the breathing air zone of the workers. The inspectors also reviewed the use of continuous air monitors to monitor real-time airborne conditions in accordance with FitzPatrick procedures. The inspectors verified that FitzPatrick's program for monitoring loose surface contamination in areas of the plant was adequate to assess the potential for airborne contamination conditions.

Instructions to Workers

The inspectors observed various radioactive material containers and verified that they were labeled and controlled in accordance with 10 CFR Part 20 requirements.

Radiation work permits (RWPs) associated with the radiological risk-significant work activities listed above were evaluated by the inspectors to identify what work control instructions or control barriers were specified and that plant-specific technical specification HRA requirements were met, including the use of applicable electronic personal dosimeter alarm setpoints that were specified in conformance with survey indications and plant policy.

The inspectors reviewed one electronic personal dosimeter dose rate alarm occurrence that was documented in a CR. The inspectors verified that FitzPatrick staff responded appropriately to the occurrence and that corrective actions and dose evaluations were adequate.

Contamination and Radioactive Material Control

The inspectors conducted observations at the main radiological controlled area egress location to observe the performance of personnel surveying and releasing material for unrestricted use to verify that those activities were performed in accordance with plant procedures and the procedures were sufficient to control the spread of contamination and prevent unintended release of radioactive materials from the site.

The inspectors reviewed FitzPatrick's criteria for the survey and release of potentially contaminated material and verified that the radiation detection instrumentation was being used at its most effective sensitivity capability.

The inspectors selected three sealed sources from FitzPatrick's inventory records and verified that the required semi-annual leak tests were performed. The inspectors verified that there have been no changes in the inventory of sources currently listed in the National Source Tracking System.

Radiological Hazards Control and Work Coverage

During tours of the facility and review of the work activity listed above, the inspectors evaluated the ambient radiological conditions and verified that existing conditions were consistent with posted surveys, RWPs, and worker briefings, as applicable.

During these work activity performance observations, the inspectors verified the adequacy of radiological controls, such as required surveys (including system breach radiation, contamination, and airborne surveys), radiation protection job coverage (including audio and visual surveillance for remote job coverage), contamination controls, and means of using electronic personal dosimeters in high noise areas as HRA monitoring devices.

The inspectors verified that radiation monitoring devices were placed on the individual's body appropriately to monitor dose from external radiation sources. This review included high-radiation work areas with significant dose rate gradients.

The inspectors reviewed two RWPs for work within potential airborne radioactivity areas with the potential for individual worker internal exposures. The inspectors evaluated the airborne radioactivity controls and monitoring, including potentials for significant airborne radioactivity levels (e.g., grinding, grit blasting, system breaches, entry into tanks, cubicles, reactor cavities). For these selected potential airborne radioactive areas, the inspectors verified the appropriate use of high-efficiency particulate air ventilation system operation.

The inspectors examined the station's physical and programmatic controls for highly activated or contaminated materials (nonfuel) stored within the spent fuel pool and verified that appropriate controls were in place to preclude inadvertent removal of these materials from the pool.

Tours within the radiological controlled area were conducted by the inspectors to evaluate radiological postings and physical controls for HRAs and very high radiation areas (VHRAs) with respect to regulatory requirements.

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Risk-Significant High Radiation Area and Very High Radiation Area Controls

The inspectors discussed with the radiation protection manager and one first-line health physics supervisor, the controls and procedures for high-risk HRAs and VHRAs and actions to be taken during changing plant conditions.

Radiation Worker Performance

During observation of the work activity listed above, the inspectors observed radiation worker performance with respect to applicable radiation protection work requirements to determine if workers were aware of the significant radiological conditions in their workplace and their work performance was within the RWP control/limit requirements specified for the work performed.

The inspectors reviewed several radiological problem reports since the last inspection that identified the cause of the event to be human performance errors to determine if there was an observable pattern traceable to a similar cause and if this perspective matched the corrective action approach taken by station personnel to resolve the reported problems.

Radiation Protection Technician Proficiency

During observation of the work activity listed above, the inspectors evaluated the performance of radiation protection technicians with respect to radiation protection work requirements and determined that technicians were aware of the radiological conditions in their workplace and that the RWP controls/limits and their performance was consistent with their training and qualifications with respect to the radiological hazards and work activities.

The inspectors reviewed several radiological problem reports since the last inspection that identified the cause of the event to be radiation protection technician error to determine if there was an observable pattern traceable to a similar cause and if this perspective matched the corrective action approach taken by FitzPatrick staff to resolve the reported problems.

Problem Identification and Resolution

The inspectors verified that problems associated with radiation monitoring and exposure control were being identified by FitzPatrick personnel at an appropriate threshold and were properly addressed for resolution in the corrective action program (CAP).

b. Findings

No findings were identified.

2RS4 Occupational Dose Assessment (71124.04)

a. Inspection Scope

The inspectors reviewed the most recent National Voluntary Laboratory Accreditation Program (NVLAP) accreditation report on FitzPatrick.

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The inspectors verified that FitzPatrick's personnel dosimeters that require processing were NVLAP accredited. The inspectors verified the vendor's NVLAP accreditation. The inspector ensured that the approved irradiation test categories for each type of personnel dosimeter used were consistent with the types and energies of the radiation present, and how the dosimeter was being used.

The inspectors verified that FitzPatrick informed workers, as appropriate, of the risks of radiation exposure to the embryo/fetus, the regulatory aspects of declaring a pregnancy, and the specific process to be used for (voluntarily) declaring a pregnancy.

The inspectors selected individuals who had declared their pregnancy during the current assessment period, and verified that FitzPatrick's radiological monitoring program for declared pregnant workers was technically adequate to assess the dose to the embryo/fetus. The inspectors reviewed the exposure results and monitoring controls employed by FitzPatrick and with respect to the requirements of 10 CFR Part 20. Two workers had declared pregnancies in the past 12 months.

b. Findings

No findings were identified.

2RS5 Radiation Monitoring Instrumentation (71124.05)

a. Inspection Scope

During the period July 18 through 22, 2011, the inspectors conducted the following activities to verify that FitzPatrick personnel were providing accurate and operable radiation monitoring instruments used to 1) monitor areas, materials, and workers to ensure a radiologically safe work environment, and 2) detect and quantify radioactive process streams and effluent releases. Implementation of these controls was reviewed against the criteria contained in 10 CFR Part 20, relevant TSs, and FitzPatrick's procedures.

- The inspectors reviewed the UFSAR to identify applicable radiation monitors associated with transient high and VHRAs including those used in remote emergency assessment.
- The inspectors obtained a list of in-service survey instrumentation including air samplers, neutron survey instruments, personnel and small article monitors. The inspectors reviewed the list to determine if an adequate number of instruments were available to support operations.
- The inspectors reviewed two FitzPatrick self-assessments for contamination and radioactive material control and radiation protection instrumentation and protective equipment.
- The inspectors reviewed source check and calibration procedures for the radiation monitoring instruments.
- The inspectors reviewed alarm set-points for area radiation monitors and the basis for the set-points.
- The inspectors reviewed the alarm set-points and basis for effluent monitors and the methods used to calculate the set-points.

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Walkdowns and Observations

- The inspectors walked down the following radiation monitors:
 - a) 17-04-1 drywell monitor 'A';
 - b) 17-04-2 drywell monitor 'B';
 - c) 17-RM-150'A'/'B' steam jet air ejector(SJAE) off-gas;
 - d) 17RM-461 TB exhaust;
 - e) 17RM-351 service water;
 - f) 17RM-350 liquid radwaste effluent monitor; and
 - g) 17RM-456 refuel floor exhaust;
- The inspectors verified that configuration of the monitors aligned with the Offsite Dose Calculation Manual (ODCM) descriptions. The inspectors looked for monitor degradation and out of service tags.
- The inspectors verified the calibration and source check of 10 portable survey instruments and observed their material condition.
- The inspectors observed source checks of portable survey instruments.
- The inspectors walked down eight area radiation monitors and verified the readout with a portable survey instrument.
- The inspectors verified periodic source checks were performed for two personnel monitors and two small article monitors.

Calibration and Testing Program

- The inspectors verified for three effluent monitor instruments that channel calibration and functional tests were performed consistent with TSs and the ODCM. The inspectors also verified that the monitors were calibrated with National Institute of Standards and Technology (NIST) traceable sources that represent the plant nuclide mix.
- The inspectors verified that the effluent monitor alarm set-points were established at or below the ODCM limits.

Laboratory Instrumentation

- The inspectors verified laboratory analytical instruments daily performance checks and calibration data indicated the frequency of calibrations was adequate and there was no indication of degraded instrument performance. The inspectors reviewed performance for the planchet counter-5's and the high purity germanium and germanium lithium detector Nos. 1, 2, 3, and 4 systems.

Whole Body Counter

- The inspectors reviewed the methods and sources used to perform whole body counter functional checks before daily use and verified the check sources are appropriate and align with the plant isotopic mix.
- The inspectors reviewed the most recent calibration report for the whole body counter and verified the sources used were representative of the plant source term and that appropriate calibration reference devices were used.

Post Accident Monitoring Instrumentation

- The inspectors reviewed a post accident high-range monitor calibration.
- The inspectors verified that an electronic calibration was performed for all range decades above 10 rem/hour and that at least one decade at or below 10 rem/hour were calibrated using an appropriate radiation source.
- The inspectors verified that the acceptance criteria were reasonable.
- The inspectors reviewed the calibration of two high-range effluent monitors and reviewed their availability.
- The inspectors reviewed FitzPatrick's capability to collect high-range, post accident iodine effluent samples.
- There was no opportunity to observe electronic or radiation calibration of these instruments during this inspection: portal monitors, personnel contamination monitors, and small article monitors.
- The inspectors verified that the alarm set-point values for one of each type of these instruments were reasonable to ensure that licensed material was not released from the site.
- The inspectors reviewed the calibration documentation for each instrument selected.

Portable Survey Instruments, Area Radiation Monitoring System, Electronic Dosimetry, and Air Samplers/ Continuous Atmospheric Monitoring (CAMs)

- The inspectors reviewed calibration documentation for at least one of each type of instrument. The inspectors reviewed detector measurement geometry and calibration methods and had the technician demonstrate the use of its instrument calibrator.
- The inspectors verified that FitzPatrick staff took appropriate corrective action for instruments found significantly out of calibration and evaluated the possible consequences of instrument use since the last successful calibration or source check.

Instrument Calibrator

- The inspectors reviewed the current output values and verified FitzPatrick periodically measured calibrator output over the range of instruments used.
- The inspectors verified the measurement device was calibrated by a facility using NIST traceable sources.

Calibration and Check Sources

- The inspectors verified the check sources used were representative of the types and energies of the radiation encountered in the plant.

Problem Identification and Resolution

- The inspectors verified that problems associated with radiation monitoring instrumentation were being identified at the appropriate threshold and entered into the CAP.

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b. Findings

No findings were identified.

2RS7 Radiological Environmental Monitoring Program (71124.07 - 1 sample)

a. Inspection Scope

The inspectors reviewed the annual radiological environmental operating reports and the results of any FitzPatrick assessments since the last inspection, to verify that the radiological environmental monitoring program (REMP) was implemented in accordance with the plant TSs and the ODCM. The inspectors reviewed the report for changes to the ODCM with respect to environmental monitoring, commitments in terms of sampling locations, monitoring and measurement frequencies, land use census, interlaboratory comparison program, and analysis of data.

The inspectors reviewed the ODCM to identify locations of environmental monitoring stations.

The inspectors reviewed the UFSAR for information regarding the environmental monitoring program and meteorological monitoring instrumentation.

The inspectors reviewed the annual effluent release report and the 10 CFR Part 61, "Licensing Requirements for Land Disposal of Radioactive Waste," report, to determine if FitzPatrick was sampling, as appropriate, for the predominant and dose-causing radionuclides likely to be released in effluents.

The inspectors walked down air sampling stations and thermoluminescent dosimeter (TLD) monitoring stations to determine whether they were located as described in the ODCM and to determine the equipment material condition.

For the air samplers and TLDs selected above, the inspectors reviewed the calibration and maintenance records to verify that they demonstrate adequate operability of these components. Additionally, the inspectors reviewed the calibration and maintenance records of composite water samplers as available.

The inspectors verified that FitzPatrick staff had initiated sampling of other appropriate media upon loss of a required sampling station.

The inspectors observed the collection and preparation of environmental samples from different environmental media (e.g., ground and surface water, milk, vegetation, sediment, and soil) as available. The inspectors verified that environmental sampling was representative of the release pathways as specified in the ODCM and that sampling techniques were in accordance with procedures.

Based on direct observation and review of records, the inspectors verified that the meteorological instruments were operable, calibrated, and maintained in accordance with guidance contained in the UFSAR, NRC Regulatory Guide 1.23, "Meteorological Monitoring Programs for Nuclear Power Plants," and FitzPatrick procedures. The inspectors verified that the meteorological data readout and recording instruments in the control room and at the tower were operable.

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The inspectors verified that missed and or anomalous environmental samples were identified and reported in the annual environmental monitoring report. The inspectors reviewed FitzPatrick's assessment of any positive sample results. The inspectors reviewed the associated radioactive effluent release data that was the source of the released material.

The inspectors selected SSCs that involved or could reasonably involve licensed material for which there is a credible mechanism for licensed material to reach ground water, and verified that FitzPatrick had implemented a sampling and monitoring program sufficient to detect leakage of these SSCs to ground water. There have been no significant changes in this program area since the last inspection.

The inspectors verified that records, as required by 10 CFR Part 50.75(g), of leaks, spills, and remediation since the previous inspection were retained in a retrievable manner.

The inspectors reviewed any significant changes made by FitzPatrick to the ODCM as the result of changes to the land census, long-term meteorological conditions (three year average), or modifications to the sampler stations since the last inspection. The inspectors reviewed technical justifications for any changed sampling locations. The inspectors verified that FitzPatrick performed the reviews required to ensure that the changes did not affect its ability to monitor the impacts of radioactive effluent releases on the environment.

The inspectors verified that the appropriate detection sensitivities with respect to TS/ODCM were used for counting samples. The inspectors reviewed quality control charts for maintaining radiation measurement instrument status and actions taken for degrading detector performance.

The inspectors reviewed the results of FitzPatrick's interlaboratory comparison program to verify the adequacy of environmental sample analyses performed by FitzPatrick. The inspectors verified that the interlaboratory comparison test included the media/nuclide mix appropriate for the facility.

The inspectors verified that problems associated with the REMP were being identified by FitzPatrick at an appropriate threshold and were properly addressed for resolution in FitzPatrick's CAP. The inspectors verified the appropriateness of the corrective actions for a selected sample of problems documented by FitzPatrick that involved the REMP.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151 - 6 samples)

.1 Mitigating Systems Cornerstone - Safety System Functional Failures (1 sample)

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a. Inspection Scope

The inspectors sampled FitzPatrick's submittals for the safety system functional failures performance indicator for the period of October 1, 2010, through June 30, 2011. To determine the accuracy of the performance indicator data reported during that period, the inspectors used definitions and guidance contained in Nuclear Energy Institute (NEI) 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6. The inspectors reviewed licensee event reports (LERs) and NRC integrated inspection reports to validate the accuracy of the submittals.

b. Findings

No findings were identified.

.2 Barrier Integrity Cornerstone - Reactor Coolant System (RCS) Specific Activity and RCS Leakage (2 samples)

a. Inspection Scope

The inspectors reviewed FitzPatrick staff's submittals for the RCS specific activity and RCS leakage performance indicators for the period of October 1, 2010, through June 30, 2011. To determine the accuracy of the performance indicator data reported during that period, the inspectors used definitions and guidance contained in NEI 99-02. The inspectors reviewed RCS sample analysis and control room log summaries and to validate the accuracy of the submittals.

b. Findings

No findings were identified.

.3 Initiating Events Cornerstone - Unplanned Scrams, Unplanned Power Changes, and Unplanned Scrams with Complications (3 samples)

a. Inspection Scope

The inspectors reviewed FitzPatrick staff's submittals for the unplanned scrams per 7,000 critical hours, unplanned power changes per 7,000 critical hours, and unplanned scrams with complications performance indicators for the period of October 1, 2010, through June 30, 2011. To determine the accuracy of the performance indicator data reported during that period, the inspectors used definitions and guidance contained in NEI 99-02. The inspectors reviewed control room logs and NRC integrated inspection reports to validate the accuracy of the submittals.

b. Findings

Introduction: The inspectors identified an unresolved item (URI) associated with FitzPatrick staff's interpretation of guidance for reporting unplanned power changes per 7,000 critical hours. Specifically, Entergy personnel did not report three power reductions during the second quarter of 2011 that the inspectors considered to have been reportable. The unplanned power changes per 7,000 critical hours performance indicator is defined as the number of unplanned changes in reactor power of greater than 20 percent of full-power, per 7,000 hours of critical operation excluding manual and automatic scrams.

Description: On January 11, 2011, FitzPatrick operators performed a power reduction to 55 percent to plug a leaking condenser tube. This power reduction was reported in the first quarter performance indicators as an unplanned power change. The root cause evaluation of this event determined that additional condenser tube leaks could occur. As a result, an operational decision-making issue (ODMI) action plan was developed by Entergy staff, which established four action levels for chemistry parameters (condensate demineralizer influent (CDI) conductivity, reactor water conductivity, and reactor water chloride concentration). These action levels provide guidance for operators to perform a range of actions, such as a power reduction to support condenser tube plugging. The action plan was established on April 4, 2011.

On May 6, 2011, operators observed indications of a rapid increase in hotwell conductivity and determined that CDI conductivity increased to above action level 3. In accordance with the ODMI action plan operators reduced power to 55 percent later that day to identify and plug the leaking main condenser tube.

The inspectors reviewed the guidance for reporting performance indicators in NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6. Concerning unplanned power reductions per 7,000 critical hours, the guidance states, "This indicator captures changes in reactor power that are initiated following the discovery of an off-normal condition. If a condition is identified that is slowly degrading and the licensee prepares plans to reduce power when the condition reaches a predefined limit, and 72 hours have elapsed since the condition was first identified, the power change does not count. If, however, the condition suddenly degrades beyond the predefined limits and requires rapid response, this situation would count."

In follow-up questions regarding the May 6 down power Entergy staff indicated that the down power was planned as a contingency action in the ODMI action plan and that, because the initial condition for which the action plan was written occurred greater than 72 hours prior to the down power, the down power should not be counted. The inspectors considered that notwithstanding an action plan, the condition was best described as a suddenly degrading condition that resulted in operators decreasing power the same day to address the condition. Therefore, it appeared to be appropriate to report the May 6 down power as unplanned.

In addition, the inspectors determined that FitzPatrick operators performed two power reductions to 75 percent on June 7, and June 9, 2011, to support cleaning main condenser water boxes. This cleaning was necessary to address fouling that occurred during planned maintenance on the lake intake travelling screens. The fouling was the result of operation of circulating water system gates which caused sediment to be

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ingested by the circulating water system. The inspectors determined that FitzPatrick staff did not report these two down powers as unplanned in the second quarter PI.

The inspectors reviewed the applicable guidance in NEI 99-02 which indicated that "Anticipated power changes greater than 20 percent in response to expected environmental problems (such as accumulation of marine debris, biological contaminants, animal intrusion, environmental regulations, or frazil icing) may qualify for an exclusion from the indicator. The licensee is expected to take reasonable steps to prevent intrusion of animals, marine debris, or other biological growth from causing power reductions. Intrusion events that can be anticipated as a part of a maintenance activity or as part of a predictable cyclic behavior would normally be counted, unless the down power was planned 72 hours in advance . . ."

FitzPatrick's staff indicated they considered this allowance to be applicable, in that they had taken reasonable steps to prevent intrusion by cleaning the lake water forebays prior to the maintenance. Because this activity had not been performed on line since the traveling screens had been replaced, station personnel also considered that they could not reasonably have anticipated the severity of the fouling that occurred. Finally, FitzPatrick staff included a contingency down power in the work week schedule, and noted in the applicable operating procedure that operation of the gates may require a power reduction to perform condenser cleaning.

Notwithstanding an acknowledgement by FitzPatrick staff in their procedures and work week schedule as to the possibility of a need for a plant down power, the inspectors considered that these two down power conditions were anticipated as part of a maintenance activity and appeared to have not been planned 72 hours in advance. Therefore the inspectors had questions as to the appropriateness of not reporting the plant down powers on June 7, and June 9, 2011.

FitzPatrick staff initiated a review of these issues as part of the NRC and industry performance indicator "frequently asked questions" (FAQ) process. This item remains unresolved pending further information from the FAQ process. **(URI 05000333/2011004-01, Unplanned Power Reduction PI Reporting)**

4OA2 Identification and Resolution of Problems (71152 - 2 samples)

.1 Review of Items Entered into the Corrective Action Program

a. Inspection Scope

As required by Inspection Procedure 71152, "Identification and Resolution of Problems," to identify repetitive equipment failures or specific human performance issues for follow-up, the inspectors performed a daily screening of all items entered into FitzPatrick's CAP. The review was accomplished by accessing FitzPatrick's computerized database for CRs and attending CR screening meetings. In accordance with the baseline inspection procedures, the inspectors selected items across the Initiating Events, Mitigating Systems, Barrier Integrity, and Public Radiation Safety cornerstones for additional follow-up and review. The inspectors assessed FitzPatrick personnel's threshold for problem identification, the adequacy of the cause analyses, and extent of condition review, operability determinations, and the timeliness of the specified corrective actions.

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The inspector reviewed 12 corrective action CRs that were initiated since the last radioactive effluent inspection that were associated with this program area. The inspector verified that problems identified by these CRs were properly characterized in FitzPatrick's event reporting system and that applicable causes and corrective actions were identified commensurate with the safety significance of the radiological occurrences.

b. Findings and Observations

No findings were identified.

.2 Annual Sample: Review of a Low Pressure Coolant Injection Valve Demand Failure (1 sample)

a. Inspection Scope

The inspectors selected CR-JAF-2010-04912 as a problem identification and resolution sample for a detailed follow-up review. This CR documented that on August 30, 2010, the 'B' RHR system low pressure safety injection (LPSI) outboard motor operated valve (MOV), 10MOV-27B, failed to open during a routine surveillance test. 10MOV-27B is a normally open valve that was closed to maintain reactor coolant pressure boundary while stroke testing the LPSI inboard isolation valve, 10MOV-25B. Entergy staff initiated corrective actions to replace the lower motor operator contact assembly (fingerbase), send the fingerbase for chemical analysis of residue on the contacts, and inspect upper and lower fingerbases for all risk significant MOVs in close proximity to 10MOV-27B.

The inspectors assessed FitzPatrick's problem identification threshold, apparent cause evaluation (ACE), extent of condition reviews, operability evaluations, and the prioritization and timeliness of corrective actions to determine whether FitzPatrick was appropriately identifying, characterizing, and correcting problems associated with the identified issues and whether the planned or completed corrective actions were appropriate to prevent recurrence.

b. Findings and Observations

No findings were identified. The inspectors determined that FitzPatrick staff properly implemented their CAP regarding the initial discovery of the reviewed issue. The CR packages were complete and included an ACE, operability evaluations, extent of condition reviews, use of operating experience, and contained implemented and planned corrective actions. Additionally, the elements of the CRs, ACE, and operability evaluations were detailed and thorough. Implemented and planned corrective actions were appropriate to minimize the potential of recurrence.

Additionally, the inspectors reviewed chemical analysis performed by an independent contracted laboratory on the surface contamination of the contact assembly fingers. Analysis showed that the contact fingers had an even black tarnish consisting of sulfur. The analysis determined that sulfur can be damaging to electrical contacts due to causing increased contact resistance. However, the analysis also showed that if voltage and current across the contacts was sufficient the damaging effects of the sulfide would be negligible. FitzPatrick staff concluded that source of the tarnish layer was unknown.

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Per the recommendation in the independent analysis, FitzPatrick staff reviewed the material condition of the upper and lower fingerbases for risk significant MOVs in close proximity to 10MOV-27B. The inspectors concluded that a more thorough extent of condition may have included a review of 10MOV-27B maintenance records to determine if other risk significant MOVs had been subjected to similar conditions and maintenance which may have led to contact tarnishing. Further, any MOVs identified as being susceptible to contact tarnishing could then have been included in the review of upper and lower fingerbases. However, the inspectors concluded that FitzPatrick's extent of condition was adequate because the tarnish layer on the contacts was not considered to be the cause of the MOV failure and there have been no similar MOV failures.

.3 Annual Sample: Review of the Operator Workaround Program (1 sample)

a. Inspection Scope

FitzPatrick operations department personnel monitor the impact of plant deficiencies on operational response capabilities in accordance with EN-FAP-OP-006, "Operator Aggregate Impact Index Performance Indicator," Revision 0. As inputs, this procedure utilizes the plant effect code that was assigned to the equipment deficiency in the associated work order, and the age of active equipment tagouts. From this, plant deficiencies such as operator workarounds, operator burdens, control room deficiencies and alarms, and longstanding tagouts, are tallied and converted to a performance indicator on a monthly basis. If the performance indicator is above a threshold value, then a more in-depth assessment of the aggregate impact of plant deficiencies is performed in accordance with surveillance test procedure ST-99H, "Operations Cumulative Impact Assessment," Revision 10. FitzPatrick personnel also perform this assessment on a periodic basis.

The inspectors reviewed the results of ST-99H, completed on April 5, 2011, including the resolution of items identified in the assessment. The inspectors reviewed operator workarounds (deficient conditions that require compensatory operator actions for operation during off-normal plant conditions), operator burdens (deficient conditions that require compensatory operator actions for operation during normal plant conditions), control room deficiencies such as non-functional or incorrect display information and equipment controls requiring some off-normal mode of operation, and longstanding tagouts, to assess their effect on the operator's ability to implement operating procedures under normal, off-normal, and emergency conditions.

b. Findings and Observations

No findings were identified. The inspectors determined that the station's CAP was effectively used to identify and resolve operator workaround conditions.

4OA3 Follow-up of Events and Notices of Enforcement Discretion (71153 - 1 sample)

.1 (Closed) LER 05000333/2011002-00, Failure to Isolate the Reactor Building Results in a Condition Prohibited by Technical Specifications

On January 10, 2011, the 'A' refueling floor exhaust radiation monitor was declared inoperable for maintenance. For this condition, TS 3.3.6.2 requires that the reactor building ventilation system be isolated and that the standby gas treatment (SGT) system

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be placed in operation within 24 hours. At the start of this maintenance activity this configuration had already been established to support another unrelated maintenance activity. Operators did not adequately track the TS requirements for the 'A' refuel floor exhaust radiation monitor being inoperable, and as a result, reactor building ventilation was restored at 12:30 pm after completion of the other maintenance activity. The following day, operators recognized the error and isolated the reactor building ventilation system at 2:54 pm.

The inspectors reviewed the LER and CR-JAF-2011-00189 regarding this event. The enforcement aspects of the TS violation are discussed in Section 4OA7 of this report. This LER is closed.

4OA4 Supplemental Inspections

.1 Licensee Strike Contingency Plans (92709)

a. Inspection Scope

The contract between Entergy and the FitzPatrick collective bargaining unit was due to expire during this inspection period. The inspectors evaluated the adequacy of Entergy's strike contingency plan to determine if the required minimum number of qualified personnel were available for the proper operation and safety of the facility, and to determine if the plan complied with TS and CFR requirements. Prior to expiration, a new contract agreement was reached and subsequently ratified.

b. Findings

No findings were identified.

4OA5 Other Activities

.1 Operation of an Independent Spent Fuel Storage Installation (ISFSI) at Operating Plants (60855.1)

a. Inspection Scope

The inspectors verified by direct observation and independent evaluation that FitzPatrick performed loading activities at the ISFSI in a safe manner and in compliance with applicable procedures.

b. Findings

No findings were identified.

4OA6 Meetings, Including Exit

Exit Meeting Summary

The inspectors presented the inspection results to Mr. B. Sullivan and other members of Entergy's management at the conclusion of the inspection on October 19, 2011. The

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inspectors asked Entergy personnel whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified by Entergy's personnel.

4OA7 Licensee-Identified Violations

The following violation of very low safety significance (Green) was identified by the licensee and is a violation of NRC requirements which meets the criteria of the NRC Enforcement Policy, for being dispositioned as a Non-Cited Violation.

- TS limiting condition for operation (LCO) 3.3.6.2 Condition A requires that, with one channel of the refueling floor exhaust radiation monitors inoperable, the channel be placed in trip within 24 hours. If Condition A is not met, Condition C actions C.1.1 and C.1.2 require that the reactor building ventilation system be isolated and the standby gas treatment system be placed in operation within one hour. FitzPatrick staff identified that, contrary to the above, on January 11, 2011, the TS LCO Condition A required action was not completed within 24 hours of having made the 'A' refueling floor exhaust radiation monitor inoperable, and that the Condition C required actions C.1.1 and C.1.2 were not subsequently completed within one hour. The inspectors determined this TS violation was of very low safety significance (Green) because it represented only a degradation of the radiological barrier function provided for the secondary containment, as discussed in Inspection Manual Chapter 0609.04, "Initial Screening and Characterization of Findings." This issue was entered into FitzPatrick's CAP as CR-JAF-2011-00189.

ATTACHMENT: SUPPLEMENTAL INFORMATION

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SUPPLEMENTAL INFORMATION**KEY POINTS OF CONTACT**Entergy Personnel

K. Bronson, Site Vice President
 B. Sullivan, General Manager, Plant Operations
 C. Adner, Manager, Operations
 V. Bacanskas, Manager, Design Engineering
 C. Brown, Manager, Quality Assurance, Entergy
 B. Finn, Director, Nuclear Safety Assurance
 D. Koelbel, Sr. Engineer, Fire Protection
 G. Sullivan, Acting Manager, Security
 J. Pechacek, Manager, Licensing
 D. Poulin, Manager, System Engineering
 T. Raymond, Manager, Project Management
 M. Reno, Manager, Maintenance
 P. Scanlan, Manager, Programs and Components Engineering
 E. Wolf, Manager, Radiation Protection
 M. Woodby, Director, Engineering

LIST OF ITEMS OPEN, CLOSED, AND DISCUSSEDOpened

05000333/2011004-01	URI	Unplanned Power Reduction PI Reporting
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Closed

05000333/2011002-00	LER	Failure to Isolate the Reactor Building Results in a Condition Prohibited by Technical Specifications
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Discussed

None

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

Procedures:

AOP-13, "High Winds, Hurricanes and Tornadoes," Revision 13

Section 1R04: Equipment Alignment

Procedures:

OP-13, "Residual Heat Removal System," Revision 95

OP-33, "Fire Protection", Revision 54;

OP-14, "Core Spray System," Revision 33

Section 1R05: Fire Protection

Procedures:

PFP-PWR29, "Switchgear Room-East/Elev. 272' Fire Area/Zone II/SW-2," Revision 2

PFP-PWR30, "Switchgear Room-West/Elev. 272' Fire Area/Zone IC/SW-1," Revision 2

PFP-PWR31, "Emergency Diesel Generator Spaces-South/Elev. 272' Fire Area/Zone V/EG-1, EG-2, EG-5," Revision 2

OP-60, "Diesel Generator Room Ventilation," Revision 8;

PFP-PWR14, "Crescent Area-east/ Elevation 227', 242' Fire Area/Zone XVII/RB-1E," Revision 3

PFP-PWR33, "Pump Rooms (Screenwell)/Elev. 255' Fire Area/Zone XII/SP-1, XIII/SP-2, IB/FP-1, FP-3," Revision 1

Documents:

JAF-RPT-04-00478, "JAF Fire Hazards Analysis," Revision 2

DBD-076 TAB IX, "Design Basis Document for Fire Protection, System Safe Shutdown," Revision 5

JAF-ANAL-FPS-01139, "Fire Barrier Analysis, Various Unsealed Penetrations from Crescents and Main Steam Tunnel to Torus," Revision 2

Section 1R06: Flood Protection Measures

Procedures:

EN-DC-346, "Cable Reliability Program," Revision 2

Condition Reports:

CR-JAF-2011-04407

CR-JAF-2011-04892

CR-JAF-2011-04897

Work Orders:

52285065-01

Section 1R11: Licensed Operator Requalification Program

Procedures:

AOP-41, "Feedwater Malfunction," Revision 9
EOP-2, "RPV Control," Revision 9
EOP-3, "Failure to Scram," Revision 9
EOP-3A, "Failure to Scram - ED," Revision 2
EOP-4, "Primary Containment Control," Revision 8

Section 1R12: Maintenance Effectiveness

Procedures:

EN-DC-203, "Maintenance Rule Program", Revision 1
EN-DC-204, "Maintenance Rule Scope and Basis," Revision 2
EN-DC-205, "Maintenance Rule Monitoring", Revision 3
EN-DC-206, "Maintenance Rule (a)(1) Process," Revision 1
OP-25, "Control Rod Drive Hydraulic System", Revision 80
ST-8Q, "Testing of the Emergency Service Water System", Revision 41

Documents:

JAF-RPT-CRD-02493, "Maintenance Rule Basis Document System 003 Control Rod Drive Hydraulic System", Revision 8
System Health Report, Control Rod Drive Hydraulic System, 2nd Quarter, 2011
JAF-RPT-MULTI-02294, "Maintenance Rule Basis Document for Service Water Systems Including Sysetm 10 (RHR SW), 46 (Normal SW), and 46-ESW (Emergency SW)," Revision 10
System Health Report, Emergency Service Water System, 2nd Quarter, 2011
Quarterly SLC system health reports for second quarter 2010 through second quarter 2011
JAF-RPT-SLC-02282, "Maintenance Rule Basis Document System 11, Standby Liquid Control," Revision 6
JENG-APL-11-002, "Maintenance Rule (a)(1) Action Plan, System 11 Standby Liquid Control," Revision 1

Condition Reports:

CR-JAF-2007-00625
CR-JAF-2009-03994
CR-JAF-2010-00894
CR-JAF-2010-02557
CR-JAF-2011-00894

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

Procedures:

AP-05.13, "Maintenance During LCOs," Revision 10
AP-10.10, "On-Line Risk Assessment," Revision 7
EN-WM-104, "On Line Risk Assessment," Revision 4

Section 1R15: Operability Evaluations

Procedures:

EN-LI-102, "Corrective Action Process," Revision 16
 EN-OP-104, "Operability Determination Process," Revision 5
 ISP-104A, "RPS Reactor Pressure Instrument Response Time Test (ATTS)", Revision 0

Section 1R18: Plant Modifications

Procedures:

EN-DC-136, "Temporary Modifications," Revision 6
 EN-DC-115, "Engineering Change Process," Revision 10
 EN-DC-117, "Post Modification Testing and Special Instructions," Revision 4

Documents:

EC 15347, "Install Pomana Type Test Jacks in Panels 09-15, 09-17 for RPS Test Box Use"
 EC 25477, "Recirc Tach Generator 02-184P-1A (TACH) 115V Output Acceptance"
 EC 25480, "Recirc Tach Generator 02-184P-1B (TACH) 115V Output Acceptance"

Section 1R19: Post Maintenance Testing

Procedures:

ST-1MA, "A MCLCS Valve Exercise (IST)", Revision 1
 ISP-104A, "RPS Reactor Pressure Instrument Response Time Testing (ATTS)," Revision 0
 ARP 09-5-2-60, "ATTS RPS Div B1 or B2 Gross Fail or TU Inop," Revision 3
 ISP-175B1, "Reactor and Containment Cooling Instrument Functional Test/Calibration (ATTS)," Revision 16
 OP-14, "Core Spray System," Revision 33
 IPS-150A, "RCIC Auto Isolation Instrument Function Test/ Calibration (ATTS)," Revision 34

Section 2RS1: Radiological Hazard Assessment and Exposure Controls

Procedures:

EN-RP-121, "Radioactive Material Control," Revision. 6,
 EN-RP-101, "Access Control for Radiologically Controlled Areas," Revision 6
 EN-RP-131, "Air Sampling," Revision. 8

Documents:

Quality Assurance Audit Report No. QA-14-2009-JAF-1, "Radiation Protection"
 Quality Assurance Audit Report No. QA-14/15-2009-JAF-1, "Radiation Protection / Radwaste"

Condition Reports:

CR-JAF-2011-01925	CR-JAF-2011-03076	CR-JAF-2011-02608
CR-JAF-2011-02747	CR-JAF-2011-03905	CR-JAF-2011-03350
CR-JAF-2011-03645	CR-JAF-2011-02394	CR-JAF-2011-04455
CR-JAF-2011-08585	CR-JAF-2011-03154	
CR-JAF-2011-02007	CR-JAF-2011-04367	

Section 2RS4: Occupational Dose Assessment

Documents:

NVLAP On-Site Assessment Report for Landauer, Inc., May 2010
 Personnel Dosimetry Performance Testing Conducted for NVLAP at Pacific Northwest National Laboratory for Landauer, Inc., May 2010

Section 2RS5: Radiation Monitoring Instrumentation

Procedures:

RP-INST-02.04, "Count Rate Meter, Ludlum Model 177," Revision 6
 RP-INST-02.06, "Dose Rate Meter, Bicon Micro-Rem," Revision 3
 RP-INST-02.08, "Ion Chamber Dose Rate Meter," Revision 4
 RP-INST-03.01, "Area Radiation Monitors," Revision 3
 RP-INST-03.03, "Containment Radiation Monitor System Response Test and Preplanned Alternate Monitoring Method," Revision 9
 RP-INST-03.04, "PASS Radiation Monitor," Revision 2
 RP-INST-04.01, "Area Radiation Monitor, Dosimeter Corporation," Revision 5
 RP-INST-04.02, "Whole Body Contamination Monitor IPM," Revision 6
 EN-RP-308, "Small Articles Monitor (SAM) Model 9," Revision 4
 RP-INST-04.08, "MGPI Telepole WR Extendable GM Survey Meter," Revision 4
 EN-RP-306, "PM-7 Portal Monitor," Revision 2
 RP-INST-05.02, "Electrometer, Victoreen Model 500," Revision 1
 SP-03.01, "Main Steam Line and SJAE Radiation Monitor Calibration," Revision 13
 SP-03.08, "HR High Range Effluent Monitors," Revision 0
 SP-03.08RW, "Radwaste Bldg Gaseous Effluent Monitors Monitor," Revision 1
 SP-03.07, "Liquid Process Radiation Monitors," Revision 6
 IMP-17.2, "Process Radiation Monitoring System Liquid Process Radiation Monitors Test/Calibration," Revision 15
 IMP-17.12, "Ventilation Radiation Monitor Removal/Return to service for Preventive Maintenance Activities," Revision 14
 ISP-17-4A, "Dry Well Continuous Atmospheric Monitoring System," Revision 1
 ISP-17-4B, "Dry Well Continuous Atmospheric Monitoring System," Revision 1
 ISP-26A, "Radwaste Bldg. Exhaust Radiation Monitor Channel A Functional Test/Calibration," Revision 1

Instrument Calibrations Reviewed:

Model RO-20 Ion Chamber Survey Meter: #1100 - 3/3/11; #1107 - 4/11/11; #1116 - 10/5/10; #1118 - 10/5/10; #1110 - 12/13/10
 Bicon Micro-Rem: #546 - 10/28/10; #543 - 4/7/10; #544 - 4/7/10
 Ludlum Model 177: #348 - 6/28/11; #366 - 6/29/11
 Post Accident Sampling System Radiation Monitor: #RI-507 & #RI-665 - 4/6/11
 Area Radiation Monitor: #19 - 3/14/11; #24 - 12/2/10; #26 - 11/22/10; #30 - 9/3/10
 MGPI Telepole WR Extendable GM Survey Meter: #11694 - 3/29/11; #16 - 2/18/11
 PM-7 Portal Monitor: #733 - 12/11/09
 Main Steam Line and SJAE Radiation Monitors: 17RM-150A - 8/20/08; 17RM-150B - 8/30/10
 High Range Effluent Monitors: 17RM-53A - 12/15/09; 17RM-53B - 9/8/09
 Radwaste Building Gaseous Effluent Monitors: 17RM-458A - 8/25/10; 17RM-458B - 3/16/10
 Liquid Process Radiation Monitors: 17RM-351 - 8/25/10; 17RM-350 - 9/11/10

Process Radiation Monitoring System Liquid Process Radiation Monitors: 17RM-350 - 6/1/10;
 17RM-351 - 6/1/10; 17RM-352 - 6/1/10
 Ventilation Radiation Monitor: 17RM-452B - 1/19/11
 Dry Well Continuous Atmospheric Monitoring System: 17RM-102A - 6/7/11; 17RM-103A - 6/7/11;
 17RM-102B - 6/9/11; 17RM-103B - 6/9/11
 Radwaste Building, Exhaust Radiation Monitor Channel A Functional Test/Calibration: 17RM-
 458A - 5/4/11
 Post Accident Containment High Range Radiation Monitors: 27RM-104A - 12/11/09;
 27RM-104B - 9/1/10

Condition Reports:

CR-JAF-2010-00508	CR-JAF-2010-03180	CR-JAF-2010-05688
CR-JAF-2010-01156	CR-JAF-2010-03341	CR-JAF-2010-05887
CR-JAF-2010-01893	CR-JAF-2010-03411	CR-JAF-2010-07300
CR-JAF-2010-02130	CR-JAF-2010-03680	CR-JAF-2010-07974
CR-JAF-2010-02301	CR-JAF-2010-03989	CR-JAF-2010-08564
CR-JAF-2010-02500	CR-JAF-2010-04003	CR-JAF-2011-00063
CR-JAF-2010-02702	CR-JAF-2010-04018	CR-JAF-2011-00873
CR-JAF-2010-02764	CR-JAF-2010-04858	CR-JAF-2011-01960
CR-JAF-2010-02988	CR-JAF-2010-05246	CR-JAF-2011-02533
CR-JAF-2010-03090	CR-JAF-2010-05534	CR-JAF-2011-02851

Section 2RS7: Radiological Environmental Monitoring Program

Procedures:

SP-04.09, "Environmental Radiological Sample and Land Use Survey Data Collection," Revision
 2
 DVP-04.01, "JAF Environmental Laboratory Quality Assurance/Quality Control Program,"
 Revision 4
 AM-03.03, "Air Particulate Filter Analysis for Gross Beta," Revision 3
 AM-03.04, "Radioiodine Cartridge Analysis Using Gamma Spectroscopy," Revision 1
 AM-04.04, "Tritium Analysis of Water Samples," Revision 10

Documents:

EA Science and Technology 2010 Nearest Resident Census
 EA Science and Technology 2010 Milk Animal Census
 EA Science and Technology 2010 Garden Census
 JAFLO-2009-0089, "RETS/ODCM Radiological Effluents Focused Assessment Learning
 Organization Condition Report"
 Quality Assurance Audit Report QA-2/6-2009-JAF-1, "Chemistry, Effluents, and Environmental
 Monitoring"
 JAF NPP Environmental Laboratory Quality Assurance Report, January 1 through December 31,
 2010
 EN-CY-102, "Entergy Nuclear Management Manual, Laboratory Analytical Quality Control,"
 Revision 3
 Tektronix Certificates of Calibration for Flow Meter Model AC-250, Numbers 10452, 10436,
 12055, 10434, 10872, 10873, 10889, 10871, and 10698
 James A. FitzPatrick (JAF) Nuclear Power Plant Annual Radiological Environmental Operations
 Report, January 1 - December 31, 2010

DVP-01.02, "Offsite Dose Calculation Manual," Revision 11
 Selected 2011 Monthly Environmental Sample Results: Milk (April and June); Canal Water
 (March); Air (April)
 AREVA Environmental Laboratory QA Snapshot Self-Assessment, November 2009

Section 4OA2: Identification and Resolution of Problems

Procedures:

EN-LI-102, "Corrective Action Process," Revision 16
 EN-LI-119, "Apparent Cause Evaluation (ACE) Process," Revision 11
 EN-LI-119-01, "Equipment Failure Evaluation," Revision 0
 EN-FAP-OP-006, "Operator Aggregate Impact Index Performance Indicator," Revision 0
 EN-OP-117, "Operations Assessments," Revision 3

Condition Reports:

CR-JAF-2011-03394	CR-JAF-2011-03772	CR-JAF-2011-04367
CR-JAF-2011-03453	CR-JAF-2011-03846	CR-JAF-2011-04378
CR-JAF-2011-03462	CR-JAF-2011-03889	CR-JAF-2011-04411
CR-JAF-2011-03491	CR-JAF-2011-04056	CR-JAF-2011-04470
CR-JAF-2011-03517	CR-JAF-2011-04090	CR-JAF-2011-04510
CR-JAF-2011-03557	CR-JAF-2011-04144	CR-JAF-2011-04736
CR-JAF-2011-03699	CR-JAF-2011-04208	CR-JAF-2011-04897
CR-JAF-2010-04912		

Work Orders:

00168145	00254824	00263097
00260441	00255108	00266823
00262558	00255131	00271498
00269919	00256050	00290608
00288871	00257767	00290609
00226615	00258129	51101401
00253882	00258793	51101426
00254107	00259208	
00254293	00261300	

Section 4OA5: Other Activities

Procedures:

RT-04.14, "Non-REMP Thermoluminescent Dosimetry (TLD) Program," Revision 3
 RP-OPS-08.01, "Routine Surveys and Inspections," Revision 18

LIST OF ACRONYMS

ACE	apparent cause evaluation
ADAMS	Agencywide Documents Access and Management System
ATWS	anticipated transient without scram
CAM	continuous atmospheric monitoring
CAP	corrective action program
CDI	condensate demineralizer influent
CFR	Code of Federal Regulations
CR	condition report
CST	condensate storage tank
DBD	design basis document
EC	engineering change
EDG	emergency diesel generator
Entergy	Entergy Nuclear Northeast
ESOMS	electronic shift operations management system
ESW	emergency service water
°F	Fahrenheit
FitzPatrick	James A. FitzPatrick Nuclear Power Plant
HRA	high radiation area
ISFSI	independent spent fuel storage installation
IMC	inspection manual chapter
IST	inservice test
kV	kilovolt
LCO	limiting condition for operation
LER	licensee event report
LPSI	low pressure safety injection
MOV	motor operated valve
NCV	non-cited violation
NEI	Nuclear Energy Institute
NIST	National Institute of Standards and Technology
NRC	Nuclear Regulatory Commission
NVLAP	national voluntary laboratory accreditation program
ODCM	offsite dose calculation manual
ODMI	operational decision-making issue
PARS	Publicly Available Record
PMT	post-maintenance testing
RB	reactor building
RBVS	reactor building ventilation system
RCIC	reactor core isolation cooling
RCS	reactor coolant system
REMP	radiological environmental monitoring program
RHR	residual heat removal
RPS	reactor protection system
RWP	radiation work permit
SGT	standby gas treatment
SJAE	steam jet air ejector
SLC	standby liquid control
SSC	structure, system, or component

ST	surveillance test
TB	turbine building
TLD	thermoluminescent dosimeter
TS	technical specification
UFSAR	updated final safety analysis report
URI	unresolved item
VHRA	very high radiation area
WO	work order